

CLAIMS

1. A method of identifying whether or not a pregnant woman is at risk of developing pre-eclampsia or whether or not her fetus is at risk of developing intrauterine growth restriction (IUGR), which method comprises measuring asymmetric dimethylarginine (ADMA) in the pregnant woman and thereby determining whether or not the woman is at risk of developing pre-eclampsia or determining whether or not her fetus is at risk of developing IUGR.
2. A method according to claim 1, wherein ADMA is measured in a fluid sample taken from the woman.
3. A method according to claim 2, wherein determining whether or not the woman is at risk of developing pre-eclampsia or determining whether or not her fetus is at risk of developing IUGR comprises determining whether or not the ADMA is greater than  $1.5\mu\text{mol/L}$  in the fluid sample.
4. A method according to any one of the preceding claims, wherein the pregnant woman is at a stage of pregnancy from 10 to 25 weeks gestation.
5. A method according to claim 4, wherein the woman is at a stage of pregnancy from 15 to 25 weeks gestation.
6. A method according to any one the preceding claims, wherein determining whether or not the woman is at risk of developing pre-eclampsia or determining whether or not her fetus is at risk of developing IUGR comprises determining whether or not the woman's ADMA level is at least 3 times the normal pregnancy level.
7. A method according to any one of the preceding claims, wherein determining whether or not the woman is at risk of developing pre-eclampsia or determining whether or not her fetus is at risk of developing IUGR comprises determining whether or not the woman has an increase in the ADMA/symmetric dimethylarginine (ADMA/SDMA) ratio that is greater than the normal pregnancy ratio.
8. A method according to claim 7, comprising determining whether or not the ADMA/SDMA ratio is at least 5 times more than the normal pregnancy ratio.

9. A method according to any one of the preceding claims, wherein the pregnant woman is suspected of being at risk of developing pre-eclampsia or her fetus is suspected of being at risk of developing IUGR.
10. A method according to claim 9, wherein the woman is a smoker.
- 5 11. A method according to any one of the preceding claims, further comprising carrying out Doppler waveform analysis of the uterine arteries and/or flow-mediated dilatation of the brachial artery in the woman.
12. Use of an ADMA antibody for the manufacture of means for determining whether or not a woman is at risk of developing pre-eclampsia or determining whether or not her fetus is at risk of developing IUGR.
- 10 13. Use according to claim 12, wherein the means comprises a buffer solution.
14. A method of inhibiting or preventing pre-eclampsia in a pregnant woman or inhibiting or preventing IUGR in her fetus, comprising administering to the pregnant woman an effective amount of an antagonist of ADMA activity.
- 15 15. A method according to claim 14, wherein the woman has been identified as at risk of developing pre-eclampsia or her fetus has been identified as at risk of developing IUGR by a method according to any one of claims 1 to 11.
- 20 16. Use of an antagonist of ADMA activity for the manufacture of a medicament for inhibiting or preventing pre-eclampsia or inhibiting or preventing IUGR.
17. A method according to claim 14 or 15 or use according to claim 16, wherein the antagonist of ADMA activity is L-arginine.
- 25 18. A non-human pregnant female animal in which pre-eclampsia has been established by administration of ADMA.
19. A non-human pregnant female animal in which IUGR has been established in her fetus by administration of ADMA.
20. A non-human fetus in which IUGR has been established by administration of ADMA to a non-human female animal that is pregnant with the fetus.
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21. A method for establishing pre-eclampsia in a non-human pregnant female animal or establishing IUGR in her fetus comprising administering ADMA to the animal in an amount sufficient to cause pre-eclampsia or IUGR.
22. A non-human pregnant female animal according to claim 18 or 19, a non-human fetus according to claim 20 or a method according to claim 21, wherein the non-human pregnant female animal is a dimethylarginine dimethylaminohydrolase (DDAH) deficient animal.
23. A method of identifying a substance which prevents or treats pre-eclampsia or prevents or treats IUGR, comprising administering a candidate substance to an animal as defined in any one of claims 18, 19 or 22 and assessing whether or not the candidate substance prevents or treats pre-eclampsia or prevents or treats IUGR.
24. A method of identifying a substance which prevents or treats pre-eclampsia or prevents or treats IUGR, comprising administering a candidate substance to a pregnant DDAH deficient animal and assessing whether or not the candidate substance prevents or treats pre-eclampsia or prevents or treats IUGR.
25. The method according to claim 24, wherein the DDAH deficient animal is a knockout mouse.
26. Use of a substance identified by the method according to any one of claims 23 to 25 for the manufacture of a medicament for preventing or treating pre-eclampsia or preventing or treating IUGR.